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Prof. Jincai Gu is a research fellow of the Third Engineer Scientific Research Institute of the Headquarters of the General Staff. He has been engaged in the research on underground protective engineering and geotechnical engineering for a long time and has made academic achievements in the reinforcement theory and technology of rock bolts and pre-stressed anchor cables for underground engineering.

Prof. Gu finished massive field tests on anti-explosion tunnels supported by shotcrete and anchor bolts and provided basic data for

developing the design method of anti-explosion tunnel engineering for the first time. Based on the geomechanics model tests of tunnels supported by shotcrete and anchor bolts, he gave the scientific proof for application of the technology of shotcrete and anchor bolts in defense and civil engineering. The results of his research on the reinforcement mechanism and design method of tunnels supported by pre-stressed anchor cables have contributed to the improvement of the theory and design level of the technology of pre-stressed anchorage in China. He established the first geomechanics laboratory for physical model experiments in the army and developed several excellent loading equipments and facilities for material mechanical property tests.

As a leader of scientific and research projects, Prof. Gu finished a large number of model experiments for protective engineering and national key water resource and hydropower projects, such as the Ertan Project on the Yalong River, Xiaolangdi Project on the Yellow River, Dachaoshan Project on the Lancangjiang River, provided basic scientific data for project design and achieved great economic, social and military benefit.

In the past 40 years, he has finished nearly 20 scientific research items, among which one item won the first prize of the National Award for Scientific and Technological Progress of China, one item the second prize, and three items the third prizes; one item won the first prize of the Award for Military Scientific and Technological Progress of China, three items the second prizes; one item won the second prize of the Award for Scientific and Technological Progress by the Ministry of Electric Power Industry of China; and one item won the practicality and new type patent. He also published over 80 papers on various international and domestic journals and at technical conferences.

Prof. Gu has won a number of national and academic awards and honors. He was named Excellent Scientist of Henan Province in 1989, and Outstanding National Middle-aged or Young Expert and acquired the Government Special Allowance in 1992. He was the winner of Talent Ladder of the General Staff in 1998. He was elected a member of the 10th National People's Congress in 2003.



Prof. Xiaonan Gong

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In 1967, after graduating from Tsinghua University for College in Civil Engineering, Gong devoted himself to the design and construction works of road and bridge engineering as a technician then an engineer at the 8601 Engineering Department. He was admitted to Zhejiang University as a graduate student in 1978, and received his Master's degree in Geotechnical Engineering in 1981, and Ph.D. in 1984, being the first Ph.D. in Zhejiang province as well as the first Ph.D. in Geotechnical Engineering in China. Then he worked as a teacher at the Department of Civil Engineering of Zhejiang University, and was promoted to Associate Professor in 1986. In the same year, he was awarded the Alexander von Humboldt Fellowship, which allowed

him to proceed his post-doctoral research in Karlsruhe University, Germany. Then he returned to China two years later. Prof. Gong was elected Professor in 1988, and in 1993 he was entitled to guide doctoral students by the State Council of China. He held the position as the Chairman of Civil Engineering Department of Zhejiang University from July 1994 to September 1999. In 2011, Prof. Gong was elected academican of the Chinese Academy of Engineering. In 2012, the Research Centre of Coastal and Urban Geotechnical Engineering of Zhejiang University was founded under his supervision and he also serves as the chairman.

Prof. Gong's main research interests include ground improvement, composite foundation, excavation engineering and computational soil mechanics. The enormous work in the theoretic progress in Geotechnical Engineering, the solutions to engineering and technical problems, as well as the engineering education has clearly demonstrated Prof. Gong's outstanding contribution to China's engineering and construction field, the academic development of geotechnical engineering, and the cultivation of advanced technologist in geotechnical engineering. He was awarded Mao Yisheng Soil Mechanics and Foundation Engineering Award in 2002, and was elected Lecturer of the Huang Wenxi Lecture in 2007. He has received 12 provincial and ministerial level awards.

Prof. Gong published the first book on composite foundation, in which he put forward the framework of generalized composite foundation theory for the first time. He published the first and second edition of the Theory and Application of Composite Foundation in 2002 and 2007, respectively. In 2011, the National Standard Technical Code for Composite Foundation was established under his guidance, which improved engineering application system of composite foundation.

From the year of 1984, Prof. Gong opened 6 courses for postgraduates in succession, namely Advanced Soil Mechanics, Soil Plasticity, Constitutive Equations of Engineering Materials, Computational Soil Mechanics, Ground Improvement Technology and Generalize Composite Foundation Theory. He has supervised 75 masters, 72 doctors and 8 postdoctors. He has published more than 20 books, over 400 papers, 21 volumes of collected works of conference papers as chief editor. He also founded the Journal of Ground Improvement in 1990.



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Education

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Experience

1990–1993, German National Research Center for Environment and Health (GSF), Institute of deep disposal of toxic and radioactive waste, Braunschweig, Germany
1993–1998, German Federal Institute for Geosciences and Natural Resources, Department of Rock Mechanics, Hannover, Germany
1998–2001, German National Research Center for Environment and Health (GSF), Underground Research Laboratory (URL) Asse Salt Mine, Remlingen, Germany
2001 till now, GRS mbH, Repository Safety Research Division, Braunschweig, Germany

Recent Publications

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Xiangling Li is a principal research scientist at the Belgian Nuclear Research Center (SCK•CEN) and currently serves as the Scientific Manager of E.I.G. EURIDICE (The European Underground Research Infrastructure for Disposal of Nuclear Waste in Clay Environment), an economical interest grouping between SCK•CEN and ONDRAF/NIRAS (Belgian National Agency for Radioactive Waste and Enriched Fissile Material), and the head of expertise group of EURIDICE in SCK•CEN.

She graduated as a Geological Engineer in 1983 from Changchun University of Geology in China (actual Jilin University). After working several years as a senior research engineer at the Shanghai Environmental Geology Centre (Geological Research Center of Shanghai) (1983–1989), she joined the M.S.M (Mechanic, Structure and Material) department of Liège University in Belgium, where she got her master degree in 1992 and her Ph.D. in 1999. After passing 6 months of post-doctor research in UPC (Universitat Politècnica de Catalunya, Spain), she joined E.I.G. EURIDICE in September 2001.

E.I.G. EURIDICE carries out the feasibility studies for the disposal of high-level and long-lived radioactive waste in clay layers and manages the URL HADES (High-Activity Disposal Experimental Site) underground laboratory, one of the first URL in the world.

During her career, she has been actively involved in numerous international and European research projects in different domain of the research: subsidence of ground, pollution of aquifer, thermal-hydro-mechanical behaviour of geological disposal of nuclear waste, such that CATSIUS clay project (calculation and testing of the behaviour of unsaturated clay as a barrier in radioactive waste repositories), CLIPEX project (modelling of the excavation of the underground gallery), SELFRACT project (Self sealing/healing behaviour of argillaceous host formations), etc.

From 2007 to 2011, she was the general coordinator of the EC project “TIMODAZ: Thermal Impact on the damaged zone around a radioactive waste disposal in clay host rocks”, within the 6th framework program, EURATOM, which involves 15 partners from 8 different countries.

She is the expert in the scientific council of French FORPRO group (deep geological formation for nuclear waste disposal) and is the Belgian representative in the Clay Club of NEA (Nuclear Energy Agency). She is the Board Member of ISRM (International Society for Rock Mechanics) URL Networking Commission.

She has chaired and organized the international conference and workshops “Impact of thermo-hydro-mechanical chemical (THMC) processes on the safety of underground radioactive waste repositories” in Luxembourg in 2009, and the international workshop “THM effects in clay host rocks for radioactive waste repositories” in Switzerland in 2012.

She is co-supervisor of more than 10 Ph.D./post doctorate students in cooperation with different Universities in Europe and China. In cooperation with her collaborators, she has published nearly 40 papers in international/national journals with selection committee, nearly 100 papers/presentations in the international/national conferences/proceedings with selection committee (about 10 keynotes/invited lectures) and more than 25 important research reports in the frame of international/national cooperation projects (as editor or main author).